



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/575,624

04/13/2006

Eiko Kato

Q78079

4641

23373 7590 10/17/2011  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

SULLIVAN, DANIELLE D

ART UNIT

PAPER NUMBER

1617

NOTIFICATION DATE

DELIVERY MODE

10/17/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@sughrue.com  
sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,624	<b>Applicant(s)</b> KATO ET AL.	
	<b>Examiner</b> DANIELLE SULLIVAN	<b>Art Unit</b> 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1,3-7,10,13,14,17,19 and 20 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,3-7,10,13,14,17,19 and 20 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/22/2010</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

### **DETAILED ACTION**

Applicant's amendments filed 2/01/2010 and 3/29/2010 have been entered. Claim 10 was amended on 2/01/2010. New claims 19 and 20 were added in the amendment filed 3/29/2010. Claims 1, 3-7, 10, 13, 14, 17, 19 and 20 are under examination.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/29/2010 has been entered.

#### ***Withdrawn Claim Rejections - 35 USC § 112***

In view of Applicant's amendment filed 2/01/2010 to claim 10 the rejection under 35 U.S.C. 112, second paragraph has been withdrawn.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Murata (US 6,306,915; effective October 23, 2001).

Applicant claims a stabilizer comprising 1,2-pentadiol or 1,2-hexandiol. The claim recitation of "for and agent for skin external use containing..." is view as intended use and has not been given patentable weight.

Murata teaches moisturizing cosmetic composition comprising a polyhydric alcohol (column 7, lines 1-11). The polyhydric alcohol is selected from diethylene glycol, propylene glycol and 1,2-pentanediol (column 8, lines 59-65).

Claim 17 is rejected under 35 U.S.C. 102(a) as being anticipated by Schmaus (WO 03/069994, effective August 28, 2003, for an English translation see US 2005/0222276. Note all citations herein refer to positions within the English equivalent document).

Applicant claims a stabilizer comprising 1,2-pentadiol or 1,2-hexandiol. The claim recitation of "for and agent for skin external use containing..." is view as intended use and has not been given patentable weight.

Schmaus et al. discloses the use of mixtures of two, three or more 1,2-alkanediols as antimicrobial active compounds (abstract). The 1,2-alkanediols are particularly selected from 1,2-pentanediol or 1,2-hexanediol [0012]. The mixtures aid in the inhibition of microorganism growth from underarm and foot odor [0066]. The cosmetics may also have skin lightening compounds such as ascorbic acid [0087].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1617

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 10, 13, 14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (EP 1077066; May 14, 1999) in view of Schmaus (WO 03/069994, effective August 28, 2003, for an English translation see US 2005/0222276. Note all citations herein refer to positions within the English equivalent document).

### **Applicant's Invention**

Applicant claims an agent comprising a) a salt of higher fatty acid ester of ascorbic acid-2-phosphoric acid ester and b) a 1,2-pentanediol or 1,2-hexanediol, wherein R is an aliphatic carboxylic acid having 10 to 20 carbon atoms. Claims 3 and 20 specify R is selected from a residual group of lauric acid, myristic acid, palmitic acid, stearic acid, 2-hexyldecanoic acid or isostearic acid. Claim 4 specifies R is a residual group of palmitic acid. Claim 5 specifies the residual group is 2-hexyldecanoic acid. Claim 6 specifies the salt of the ester is a Na salt, a K salt, a Mg salt or a Zn salt. Claim 7 specifies the ester is 0.01-20% of the formulation. Claims 10 and 19 further limits the alcohol to 0.05% to 12. Claim 13 specifies the composition further comprises water. Claim 14 is directed towards cosmetic comprising the agent.

### **Determination of the scope and the content of the prior art**

#### **(MPEP 2141.01)**

Ito et al. discloses an agent for preventing and treating skin diseases comprising an ascorbic acid derivative of formula (I) with a moisturizer selected from polyhydric alcohols such as propylene glycol and dipropylene glycol [0028], [0075] and [0078]. The salts of the ascorbic acid derivatives include sodium, potassium, magnesium and

Art Unit: 1617

zinc [0056]. Example 8 discloses a cream comprising propylene glycol (6%), sodium 6-palmitoyloxy-L-ascorbic acid-2-phosphate (7%) and water.

Ito et al. teach the fatty acid residual group is preferably an alkyl group of 4 to 21 carbons atoms and that they are preferably long-chain fatty acids, including a carboxylic residue with an alkyl group comprising 4 to 21 atoms [0047]-[0054]. Examples 1-4 disclose dipropylene glycol with sodium L-ascorbic acid-2-phosphate or potassium L-ascorbic acid-2-phosphate.

### **Ascertainment of the difference between the prior art and the claims**

#### **(MPEP 2141.02)**

Ito et al. do not disclose an example wherein Formula (I) and the polyhydric alcohol is 1,2-pentanediol or 1,2-hexanediol are in combination. However, Ito et al. teach fatty acid residual groups including a carboxylic residues with an alkyl group comprising 4 to 21 atoms. This encompasses a 2-hexyldecanoic acid which has 16 carbon atoms. Therefore, although not explicitly taught, the residual group is encompassed by the teachings of Ito et al. Furthermore, an example wherein Formula (I) and the polyhydric alcohol is 1,2-pentanediol or 1,2-hexanediol are in combination is not disclosed or taught. It is for this reason that Schmaus is joined.

Schmaus et al. teach the use of mixtures of two, three or more 1,2-alkanediols as antimicrobial active compounds (abstract). The 1,2-alkanediols are particularly selected from 1,2-pentanediol or 1,2-hexanediol [0012]. The mixtures aid in the inhibition of microorganism growth from underarm and foot odor [0066]. The cosmetics may also have skin lightening compounds such as ascorbic acid [0087].

### **Finding of prima facie obviousness**

#### **Rationale and Motivation (MPEP 2142-2143)**

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ito et al. and Schmaus and utilize formula (I) with 1,2-pentanediol or 1, 2-hexanediol with a reasonable expectation of success. One would have been motivated to add 1,2-pentanediol or 1,2-hexanediol because Schmaus teach that 1,2-pentanediol and 1,2-hexanediol have antimicrobial properties which aid in the inhibition of microorganism growth from underarm and foot odor in cosmetic formulations.

#### ***Response to Amendment***

The declaration under 37 CFR 1.132 filed 2/01/2010 in response to the rejection under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (EP 1077066; May 14, 1999) in view of Murata (US 6,306,915; effective October 23, 2001) as set forth in the last Office action is insufficient to overcome the rejection set forth above because: The showing of unexpected result fails to show an unexpected result in the composition obtained. Applicant is seeking to show the superiority of a lotion prepared with 1% ascorbic acid-2-phosphoric acid-6-palmitic acid sodium salt and 5% 1,2-pentanediol or 1,2-hexanediol, however the showing is not commensurate in scope with the claims. Currently, the claims are drawn to ascorbic acid-2-phosphoric acid structures with various residues and the scope of the ingredients amounts is not limited. Additionally,



Art Unit: 1617

it is unclear why turbidity would be undesirable at preparation since not all lotions are clear. While changes in turbidity over a length of time is usually seen as a sign of degradation this does not explain why turbidity at preparation would be considered undesirable. The declaration does not show the prevention of changes in turbidity over time but instead differences in turbidity at preparation.

### ***Response to Arguments***

Applicant's arguments filed 2/01/2010 have been fully considered but they are not persuasive.

First, Applicant argues Ito and Murata are different in their features and scope and therefore one of ordinary skill in the art would not have been motivated to combine them. The rejection under 103 in view of Ito and Murata has been withdrawn and replaced by the rejection of claims under 103 in view of Ito and Schmaus. However, Murata teaches moisturizing cosmetic composition comprising a polyhydric alcohol selected from diethylene glycol, propylene glycol and 1,2-pentanediol. Since, Ito clearly teaches a cream comprising propylene glycol, sodium 6-palmitoyloxy-L-ascorbic acid-2-phosphate, substituting 1,2-pentanediol as a polyhydric alcohol would have been at least prima facie obvious because Ito and Murata relate to the same field of endeavor, preparing cosmetic compositions.

Furthermore, Applicant argues the declaration shows evidence that employing 1,2-pentanediol or 1,2-hexanediol as the alcohol contributes to the superior and unexpected properties of the present invention. The Examiner is not convinced by this

Art Unit: 1617

argument because the claims are not drawn to a method of improving cosmetic stability. The issue is whether it would have been obvious to one of ordinary skill to combine the active ingredient with 1,2-pentanediol or 1,2-hexanediol. It is clear from the teaching of Ito and Schmaus that adding polyhydric alcohols is prima facie obvious in the art.

### ***Conclusion***

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE SULLIVAN whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun Sajjadi can be reached on (571) 272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Danielle Sullivan  
Patent Examiner  
Art Unit 1617

/Rebecca E. Prouty/  
Primary Examiner,  
Art Unit 1652